

A photograph of a single, ripe red apple with some yellowing, resting on a stack of several books. The books have various colored spines, including blue and red. The background is a dark, out-of-focus grey.

**We need a  
Commission  
for Lifelong  
Learning**

*Reform proposals for higher education to solve the skills shortage in the knowledge-intensive sector*



# A digital era requires a new education system

**On April 27, 2016**, IT&Telekomföretagen's think tank Digital utmaning (Digital challenge) presented the report "Education and adaptation"<sup>1</sup>. The document, which was in the form of a directive for a public enquiry, pointed out a number of areas within education that need reforms to work better in a digital era, with its demands for continuous reskilling.

**In 2017**, IT&Telekomföretagen made a survey on the skills needs of the digital sector, which indicated, among other things, a estimated deficit of 70,000 IT experts in 2022<sup>2</sup>. Based on the survey, a report was produced that sets out a number of proposals for actions in school, higher education and migration/integration as solutions to the shortages. One of the proposals was that the government should appoint a committee for lifelong learning.

**This report is a concretization** of the proposal for a commission, which in turn is based on the Digital utmaning report. A manifesto of ten points focusing on the needs of individuals, working life and national economy for education and skills development is presented, accompanied by a number of short and long-term proposals. The proposals from the Digital utmaning report 2016 have largely been incorporated into the long-term proposals. New to this report is the clear perspective on individual and employer needs (rather than existing education providers), and that a number of proposals are presented that can be introduced in the short term. We can no longer just talk about lifelong learning, things must start happening, and that soon!

**The Manifesto and the related proposals** have been prepared by IT&Telekomföretagen's IT skills council (IT-kompetensrådet). Consultations have been made with a number of external parties, and we would like to give special thanks to Gunnar Karlsson, Professor at the KTH Royal Institute of Technology, Ana Andric, investigator at Saco and Mattias Wiggberg, researcher at KTH. However, we want to emphasize that the proposals are entirely IT&Telekomföretagen's and do not express the external parties' positions.

**An obvious target group** for this report is the people responsible for policy-making within education among the political parties. They are not alone though - given that the skills development in the knowledge-intensive sector is crucial for the entire economy, the report's message is equally a matter for industrial and labor market politicians.



*Stockholm in April 2018\**

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\* (This document is a translation of the Swedish original "Vi behöver en kommission för livslångt lärande" / Fredrik v E, May 2018)

<sup>1</sup> <https://www.itot.se/2016/04/det-andra-radslagens-slutsatser-utbildning-och-omstallning/>

<sup>2</sup> <https://www.itot.se/2017/11/it-kompetensbristen-en-rapport-om-den-svenska-digitala-sektorns-behov-av-spetskompetens/>

# Manifesto on a Commission for Lifelong Learning

The digitalization, and the enormous need for continuous education and skills development that it entails, requires a radical change in the system of higher education so that Sweden will remain a leading knowledge nation.

We demand that the government appoint a commission for lifelong learning. Its assignment should be to produce proposals that recast the system for

education and skills development in the direction of the dream situation below.

**Dream situation:** A system where everyone, after an adequate basic education, throughout his or her life receives continuous, work-life-integrated education and reskilling tailored to the needs of individuals, employers and society.

*In order to achieve the dream situation, a system of education and skills development is required that:*

## EMPHASIS ON THE INDIVIDUAL PERSPECTIVE

- 1** *informs about, and motivates individuals to education and skills development throughout their lives.*
- 2** *makes it practically possible for individuals to carry through with education and skills development.*
- 3** *makes it easy for individuals to get their knowledge and/or skills recognized.*
- 4** *makes it easy for individuals to finance a personal investment in education and skills development.*

## EMPHASIS ON THE EMPLOYER PERSPECTIVE

- 5** *ensures that the educational content is relevant to those who will hire those who attend the education.*
- 6** *have relevant forms of practical interaction between education providers and companies of all sizes and development phases.*
- 7** *have easy-to-use forms of funding so that both companies and education providers can make an investment in education and skills development in an economically viable way.*

## EMPHASIS ON THE NATIONAL ECONOMY PERSPECTIVE

- 8** *ensures that there is a diversity of education providers that have quality assured methods for knowledge and competence transfer.*
- 9** *ensures that a diversity of institutions are available that offer flexible forms of examination.*
- 10** *has a well-considered overall model for how responsibilities and funding are shared between individuals, employers and education providers.*

# How do we achieve the dream situation? Proposals in the short and long term

1

## EMPHASIS ON THE INDIVIDUAL PERSPECTIVE

<p><b>Manifesto message:</b> "We need a system of education and skills development that ..."</p>	<p><b>Obvious obstacles today.</b></p>	<p><b>Short-term changes, based on existing legislation and with only minor public investments.</b></p>	<p><b>Reforms needed to achieve the dream situation – assignment to a commission (10-year perspective).</b></p>
<p>... informs about and motivates individuals to education and skills development throughout their lives.</p> <p>Stakeholders most concerned: Students and people wanting to change careers.</p>	<ul style="list-style-type: none"> <li>• Knowledge of, and attractiveness of, professional areas where skills are needed are insufficient.</li> <li>• Difficulties for young people to make choices that in some form, whether fact-based or perceived, bind them to a certain profession.</li> <li>• Mental images of what a career change implies deter. There are no natural "reskilling routes".</li> <li>• Difficulties for professionals to find information about courses/educations within the regular supply that enable the flexible combination of education and work.</li> </ul>	<ul style="list-style-type: none"> <li>• Make collective information efforts on education and career paths within the knowledge-intensive sector. Education and Labor Ministries, Regions, industries and study and career counselors in cooperation.</li> <li>• Explain the responsibility of the individual to plan for his education and career development. Like the school's individual development plans for pupils (IUP), all adults should have an "IUP" as part of their continuously updated CV's.</li> <li>• Make clearer the responsibility of employers of a certain size (tentatively 100 employees) to help expand the recruitment basis, eg through cooperation with schools and education providers.</li> </ul>	<ul style="list-style-type: none"> <li>• Make an overall, national review of the study and vocational guidance offered to pupils and students, with a particular focus on vocational guidance for knowledge-intensive professions. The guidance should have a far broader perspective than just about the role of the study and career counselor. It should be a responsibility and an organizational question for principals/managers at all levels in both schools and higher education.</li> <li>• Create a comprehensive program for effective working life contact from an early age (internships, case studies, study visits, lectures, etc.) in order to raise awareness about the opportunities within more complex, knowledge-intensive professions.</li> </ul>

Manifesto message:  
"We need a system of education and skills development that ..."

Obvious obstacles today.

Short-term changes, based on existing legislation and with only minor public investments.

Reforms needed to achieve the dream situation – assignment to a commission (10-year perspective).\*

... makes it practically possible for individuals to carry through with education and skills development.

Stakeholders most concerned: People wanting to change careers and specialists

- Application and admission systems, course design and examinations are largely not designed to suit people active in professional life.
- Employers generally do not have established forms of employee involvement in training and skills development alongside to their regular work.

- All state-funded education providers should draw up a plan for making their courses flexibly accessible to people active in professional life.
- Employers should provide training and skills development as a compulsory part of the employment.
- Review of the teaching methodology (eg through digital resources) of all state-funded education providers.

- Review of the possibilities of spreading academic education over a longer life period. This may mean a shorter introductory program for basic knowledge, skills, study techniques and self-discipline. After that, higher education could be alternated with work \*)
- Review of how academic education could be located in order to be more accessible to people active in professional life, eg through distance learning.
- Reform the application and admission systems so that they are adapted to people active in professional life that need more flexibility and shorter lead times.

\* Proposals marked with \*) are gathered from the Digital utmaning Directive "Education and Adaptation"

**Manifesto message:**  
"We need a system of education and skills development that ..."

**Obvious obstacles today.**

**Short-term changes, based on existing legislation and with only minor public investments.**

**Reforms needed to achieve the dream situation – assignment to a commission (10-year perspective).**

**...makes it easy for individuals to get their knowledge and/or skills recognized.**

**Stakeholders most concerned: Newly arrived immigrants, persons wanting to change careers**

- **Validation of degrees:** A cohesive national structure is lacking, and academic institutions have no incentive to develop such systems.
- **Validation of professional skills:** Existing models tend to be too rigid, detailed and bureaucratic to suit the changing and soft skills-dominated knowledge-intensive sector.

- **Validation of the degrees:** The existing "market" for validation, including the foreign academic institutions used to approve results from courses conducted in Sweden, should be monitored in order to assess the extent to which the validation that takes place at Swedish academic institutions can be developed with these as a model.
- **Validation of professional skills in knowledge-intensive professions beyond the more professional professions covered by the Swedish Validation delegation (Valideringsdelegationen):** Make the existing tests and methods more accessible through a validation voucher.

- **Review of validation systems, with a focus on the knowledge-intensive sectors' conditions.**

**Manifesto message:**  
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**Obvious obstacles today.**

**Short-term changes, based on existing legislation and with only minor public investments.**

**Reforms needed to achieve the dream situation – assignment to a commission (10-year perspective).\***

**... makes it easy for individuals to finance an a personal investment in education and skills development.**

**Stakeholders most concerned: People wanting to change careers and specialists**

- Regulations to compensate for income losses due to studies are missing. There are difficulties to access student loans for persons above a certain age.
- The limited supply of non-state-funded education aimed at individuals is usually very expensive.

- Develop the academic institutions' supplementary education (vidareutbildning) so that individuals, rather than employers, to a greater extent can receive special education programs. In a first step, short-term educations should be offered.
- Perform attempts with "reskilling vouchers" (vidareutbildningspeng).

- Review of how individuals can finance higher education throughout their lives and how public student loan systems should be designed. \*)
- As part of the above, ensure that the education premium (i.e. the wages development in relation to income loss due to studies) is maintained at a sufficiently high level.

\* Proposals marked with \*) are gathered from the Digital utmaning Directive "Education and Adaptation"

<p><b>Manifesto message:</b> ”We need a system of education and skills development that ...”</p>	<p><b>Obvious obstacles today.</b></p>	<p><b>Short-term changes, based on existing legislation and with only minor public investments.</b></p>	<p><b>Reforms needed to achieve the dream situation – assignment to a commission (10-year perspective).*</b></p>
<p>... ensures that the educational content is relevant to those who will hire those who attend the education.</p> <p><b>Stakeholders most concerned: Growing companies in the size category 50-500 employees.</b></p>	<ul style="list-style-type: none"> <li>• Collaboration between companies and institutions regarding course content is very limited, and incentives are lacking.</li> <li>• Knowledge in humanities and other general education, of increasing importance since soft skills (creativity, collaborative skills, etc.) are becoming increasingly important for all knowledge-intensive professions, is not effectively integrated into education.</li> <li>• The lack of clarity about how the Swedish National Agency for Higher Vocational Education (YH-myndigheten) assesses the difference between academic education and higher vocational education leads to the rejection of demanded higher vocational education programmes with the motivation that they are provided at the universities.</li> <li>• Higher vocational education courses are pushed to facilitate for those who want to continue directly after secondary school, which diminishes the scope for older people who want change careers or reskill themselves.</li> </ul>	<ul style="list-style-type: none"> <li>• (Focus on academic education at undergraduate level) Perform a relevance analysis, where recent graduates, and employers that employ them, assess the relevance of the courses in relation to the actual tasks that are being carried out.</li> <li>• (Focus on academic education at master level). Prior to the start of each course where there is no identified recipient (company/organization), make a relevance analysis together with the intended recipient companies/organizations.</li> <li>• Include course elements with humanistic focus in order to strengthen soft skills.</li> </ul>	<ul style="list-style-type: none"> <li>• Review of whether the higher vocational education model for assessing course programs that aspire for state funds (after an exploratory analysis of needs) can be spread to other parts of the education system *)</li> <li>• Review of the interaction between academic education and higher vocational education (yrkeshögskola) can be strengthened and if there is a reason to combine the two forms under a common system of lifelong learning *)</li> <li>• Remove all restrictions on introducing pre-requisites and demands on professional experience to higher vocational education (yrkeshögskola) programs, to enable older and more experienced people to change careers or reskill themselves.</li> <li>• Review of how SMEs’ needs for skills development look and how the academic institutions’ offerings meet these needs. *)</li> </ul>

\* Proposals marked with \*) are gathered from the Digital utmaning Directive ”Education and Adaptation”

**Manifesto message:**  
"We need a system of education and skills development that ..."

... have relevant forms of practical interaction between education providers and companies of all sizes and development phases.

**Stakeholders most concerned: Growing companies in the size category 50-500 employees.**

**Obvious obstacles today.**

- Collaboration between companies and academic institutions regarding internships or other forms of direct contact for students is largely non-existent.
- There is no incentive for teachers at academic institutions to interact in any way with companies (eg. by letting staff to spend shorter or longer periods of time at the companies).

**Short-term changes, based on existing legislation and with only minor public investments.**

- For the academic institutions, this seems to be one of the hardest nuts to crack without a major reform of the incentive structure being implemented. Best practice alternatively "Naming and shaming" has been tested without significant spreading effect.
- What can, however, be done, as part as a learning exercise before a future major reform, is to make minor investments to promote staff flow between academic institutions and the outside working life.
- Another simpler form of collaboration could be to create efficiently functioning meeting places where academia and (small and medium) companies can get a concrete benefit of each other.

**Reforms needed to achieve the dream situation – assignment to a commission (10-year perspective).**

- Review of financial incentives and other conditions (such as insurance) for employers to receive students on internships and practice in the final parts of educations.
- Review of resource allocation to education that adjusts the form of education so that professionals have an easier time to attend (time, speed, distance).
- Review of career paths for university staff that create incentives for exchanges with working life.

<p><b>Manifesto message:</b> "We need a system of education and skills development that ..."</p>	<p><b>Obvious obstacles today.</b></p>	<p><b>Short-term changes, based on existing legislation and with only minor public investments.</b></p>	<p><b>Reforms needed to achieve the dream situation – assignment to a commission (10-year perspective).</b></p>
<p>... have easy-to-use forms of funding so that both companies and trainers can make an investment in education and skills development in an economically viable way.</p> <p><b>Stakeholders most concerned: Growing companies in the size category 50-500 employees.</b></p>	<ul style="list-style-type: none"> <li>• The academic institutions are, due to the Higher Education Ordinance (Högskoleförordningen), locked in their forms of funding. For contract courses (uppdragsutbildning) cooperation is required with (usually solitary) larger companies who can finance a whole course.</li> <li>• The allocation of public funds to higher vocational education courses (yrkehögskolor) is erratic, which affects companies' willingness to invest their time in co-preparing the courses.</li> <li>• Corporate incentives to invest in education and skills development are hampered by the fact that investments (eg through tax deductions) can not be linked to the company.</li> </ul>	<ul style="list-style-type: none"> <li>• Offer subsidized courses (bidragsutbildning) to a greater extent where smaller companies can afford to procure courses that correspond to the academic institutions' regular contract courses (uppdragsutbildning).</li> <li>• For higher vocational education, make it clearer what grounds apply for getting a course approved by the Swedish National Agency for Higher Vocational Education (YH-myndigheten).</li> <li>• As a complement to the clarified grounds for higher vocational education above, opportunities should be given for education in "new" areas, by allocating a minor proportion of the Agency's total budget (eg 20%) based on more flexible grounds where the Agency can make a proactive assessment.</li> </ul>	<ul style="list-style-type: none"> <li>• Revision of financial incentives for corporate investment in staff training (eg through "skills deductions" – kompetensavdrag – for purchases of courses from external training providers, as proposed by Almega in April 2018).</li> <li>• Review of the funding of public education at large, to ensure financial conditions also for skilling targeted at professionals.</li> <li>• Consider, at least for some of the higher vocational education programs, faster cycles with multiple, or ongoing, application periods with shorter lead times.</li> </ul>

<p>Manifesto message: "We need a system of education and skills development that ..."</p>	<p>Obvious obstacles today.</p>	<p>Short-term changes, based on existing legislation and with only minor public investments.</p>	<p>Reforms needed to achieve the dream situation – assignment to a commission (10-year perspective).*</p>
<p>... ensures that there is a diversity of education providers that have quality assured methods for knowledge and competence transfer.</p> <p>Stakeholders most concerned: The whole knowledge-intensive sector.</p>	<ul style="list-style-type: none"> <li>• The academic institutions in particular, but also other education providers, are basing their activities on the notion that they "own" knowledge. Due to the Internet, in principle all knowledge is available free of charge.</li> <li>• The academic institutions in particular, but also other education providers, use traditional forms of teaching that do not utilize modern, often digitally based educational methods.</li> <li>• Education providers generally do not have methods that are tailored to the individual conditions of students and employers.</li> <li>• Education providers generally lack incentives to follow up on previous students, and thus secure the quality of education.</li> </ul>	<ul style="list-style-type: none"> <li>• Make a survey of the entire eco-system of higher education, to identify overlaps and gaps between mainly academic institutions and higher vocational education providers (The Swedish research institute Ratio has produced a number of reports on this topic).</li> <li>• As part of the survey above, review the pedagogical methods used. The perspective should be on the efficiency of conveying knowledge, rather than owning knowledge.</li> </ul>	<ul style="list-style-type: none"> <li>• Based on a review of the forms of collaboration currently taking place between the academic institutions, the higher vocational education providers, professional education and popular adult education (folkbildning), review the possibilities for strengthening such cooperation with the aim of creating a coherent system of education and learning throughout the life. *)</li> <li>• As part of the above, ensure that the programs use effective methods based on the survey mentioned in the short-term proposals here to the left.</li> </ul>

\* Proposals marked with \*) are gathered from the Digital utmaning Directive "Education and Adaptation"

<p><b>Manifesto message:</b> ”We need a system of education and skills development that ...”</p>	<p><b>Obvious obstacles today.</b></p>	<p><b>Short-term changes, based on existing legislation and with only minor public investments.</b></p>	<p><b>Reforms needed to achieve the dream situation – assignment to a commission (10-year perspective).*</b></p>
<p>... ensures that a diversity of institutions are available that offer flexible forms of examination.</p> <p><b>Stakeholders most concerned: The whole knowledge-intensive sector.</b></p>	<ul style="list-style-type: none"> <li>• Regarding education at the academic level, the institutions have a de facto monopoly on examination. It prevents the emergence of a market of providers of flexible forms of examination.</li> </ul>	<ul style="list-style-type: none"> <li>• Perform a survey of examination forms found on the ”market” (eg the use of foreign institutions to approve results from courses conducted in, for example, Sweden) and identify the ways in which they differ fundamentally from the examination made at Swedish academic institutions.</li> <li>• Attempts can be made with examination for niche knowledge and competence areas.</li> </ul>	<ul style="list-style-type: none"> <li>• Review of the possibilities of creating a system for examination of higher education that is independent from the educational institutions and suggest appropriate governance (huvudman) for such a system. The premise should be that the system be able to confirm knowledge, regardless of where or how it has been acquired, and that the system will stimulate continuous education and knowledge-based careers *)</li> </ul>

\* Proposals marked with \*) are gathered from the Digital utmaning Directive ”Education and Adaptation”

**Manifesto message:**  
"We need a system of education and skills development that ..."

... has a well-considered overall model for how responsibilities and funding are shared between individuals, employers and education providers.

**Stakeholders most concerned:** The whole knowledge-intensive sector.

**Obvious obstacles today.**

- Today, there is no overall picture of the flows of public funds (including tax deductions) that are directed in different ways to educational activities.
- Most forms of education are either fully or not at all state-funded. Intermediate forms are missing where individuals, employers and educators can part-finance.
- In practice, the dimensioning of academic programs is governed exclusively by the 18-year-olds making their first applications. Employer-demanded programs in eg IT will simply not be provided unless the 18-year-olds choose them.
- In the case of basic academic education, there is a lot of "air" in the system, due to the fact that students have a lot of spare time besides the studies that is not devoted to relevant competence-enhancing activities.

**Short-term changes, based on existing legislation and with only minor public investments.**

- Make life cycle analyzes with scenarios for different types of individuals, active at different types of employers - all with a clear future focus. These analyzes would among other things form a basis for future reforms or the education system.
- A minor financial reorganization that can be considered is that the funds that go to popular adult education (folkbildning) could be more closely linked to the real skills development needs of individuals.

**Reforms needed to achieve the dream situation – assignment to a commission (10-year perspective).\***

- As part of a more comprehensive reform of how the academic institutions should be financed, revise whether dimensioning can be made less dependent on how first-time students choose. For example, dimensioning can be steered more by the choices on the master level and the choices that professionally active people make.
- Review of the efficiency of the Swedish academic system, which includes an assessment of the effects of alternating academic education with work for a number of years. \*)
- Review of funding for education outside the state-financed sector. \*)

\* Proposals marked with \*) are gathered from the Digital utmaning Directive "Education and Adaptation"





# IT&Telekomföretagen

**– an engine for digitizing Sweden**

IT&Telekomföretagen is an industry and employer association for companies in the IT and telecom sector. We are approximately 1,200 member companies which together have close to 100,000 employees.

IT&Telekomföretagen's mission is to create the best possible conditions for a Swedish IT and telecom industry. We do this through, among other things, by offering competitive member services, influencing policy development and through driving, facilitating and highlighting the benefits of digitizing Sweden.

IT&Telekomföretagen is one of seven cooperating associations within Almega. IT&Telekomföretagen's member companies are also members of the Federation of Swedish Enterprise.

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